

## REMARKS/ARGUMENTS

This is a Response to the Office Action mailed April 17, 2007, in which a three (3) month Shortened Statutory Period for Response has been set, due to expire July 17, 2007. Attached is the requisite fee for a two-month extension of time, to September 17, 2007. Claims 11 and 12 are currently amended. Claim 10 is canceled. No new matter has been added to the application. No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090. Upon entry of the amendments herewith, claims 1-9 and 11-16 remain pending.

1. Rejections Under 35 U.S.C. § 112, First Paragraph

Claim 10 was rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Claim 10 is canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to this claim is rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this canceled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

2. Rejections Under 35 U.S.C. § 102(b)

In the Office Action, at paragraph 6, claims 1, 4, 8, 9, 13, and 14 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by *Takayuki et al.* (JP 2003-242835), hereinafter *Takayuki*. For a proper rejection of a claim under 35 U.S.C. § 102, the cited reference must disclose all elements and/or features of the claim. See, e.g., *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 U.S.P.Q.2d 1129 (Fed. Cir. 1988).

a. Independent Claim 1

Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Takayuki* does not disclose, teach, or suggest a “kneading step of kneading a

conductive powder, a binder and a solvent to form a clay-like mixture” and “a slurring step of adding the same *solvent* as that used at the kneading step to the mixture obtained by the kneading step to lower the viscosity of the mixture, thereby slurring the mixture” as recited in claim 1 (emphasis added).

*Takayuki* discloses that “first, the 1<sup>st</sup> mil base 16 containing a formed element, a dispersant, and a solvent component is prepared, mixing and the primary process 17 which carries out distributed processing are carried out for these, and the 1<sup>st</sup> slurry is obtained” [0081]. Only a formed element, a dispersing agent, and a solvent component are mixed during the first step. No binder is mixed to form a slurry. Accordingly, *Takayuki* does not anticipate claim 1, and the rejection should be withdrawn.

*Takayuki* next discloses “the 2<sup>nd</sup> mil base 19 which mixed the resinous principle and the solvent component to the 1<sup>st</sup> slurry 18 is produced ... and the second slurry is obtained” [0082]. Even though a resin component and solvent are mixed with the first slurry 18 to form the second slurry at the second step, this is not similar to the claimed invention since there is no “kneading a conductive powder, a binder and a solvent to form a clay-like mixture” as recited in claim 1.

*Takayuki* does not specifically disclose any type of kneading. Here, *Takayuki* only discloses “mixing” the solid component, dispersing agent, and solvent component. Mixing is not the same as the “kneading” recited in claim 1. That is, *Takayuki* does not specifically disclose any type of kneading. Further, it is not inherent in *Takayuki* to knead the mixed materials. Kneading further mixes materials. However, materials may be stirred, shaken, or agitated to cause mixing. In view that mixing of materials may be done in a variety of manners, none of which are disclosed in *Takayuki*, it is not inherent in *Takayuki* that the materials are kneaded. Since kneading is not specifically or inherently disclosed, *Takayuki* does not anticipate claim 1, and the rejection should be withdrawn for at least this reason alone.

*Takayuki* next discloses a “3<sup>rd</sup> process 22 which removes a massive object 1.0 micrometers or more from the 2<sup>nd</sup> slurry 21 can be carried out” [0083]. Finally, *Takayuki* discloses a “4<sup>th</sup> process 23 which adjusts the solvent ratio under conductive paste may be carried out by removing a part of solvent component after the 3<sup>rd</sup> process 22 mentioned above” [0084]. Thus, “when the 4<sup>th</sup> process 23 is carried out, ... a part of solvent component contained in a

conductive paste is removed, but when a solvent component consists of single components and that part and a solvent component consist of two or more components, some or all of a solvent with the lowest boiling point is removed in it, and it is adjusted to moderate paste viscosity.” [0087] (emphasis added). Clearly, the solvent is being removed at the disclosed *Takayuki* 4<sup>th</sup> process 23.

The Office Action alleges that “in the 4<sup>th</sup> process, solvent ratio can be adjusted (adding or removing solvent) after the 3<sup>rd</sup> process to control conductive paste viscosity ([0084], [0087]). The reference specifically or inherently meets each of the claimed limitations.” However, *Takayuki* does not disclose either specifically or inherently that the solvent ratio can be adjusted by adding solvent after the 3<sup>rd</sup> process as alleged.

*Takayuki* discloses that hyperviscosity of the slurry is “attained by carrying out excessive-amount addition of the solvent beforehand” at the first step 17, the second step 20, or the third step 22 [0086]. Accordingly, an excessive amount of solvent is added before the start of the fourth process 23. Then, *Takayuki* clearly states that the solvent is removed during the 4<sup>th</sup> process 23 to moderate viscosity [0087]. It is apparent that *Takayuki* adjusts reduces viscosity in the conductive paste by removing the solvent component at the fourth step 23.

Further *Takayuki* does not inherently disclose adding the same *solvent* as that used at the kneading step because the *Takayuki* 4<sup>th</sup> process 23 changes the second slurry to a “moderate paste viscosity.” Adding additional solvent after the 3<sup>rd</sup> process to control conductive paste viscosity would have the opposite effect such that the viscosity would be increased. Accordingly, the second slurry would not change to have a moderate paste viscosity as disclosed in *Takayuki*.

Accordingly, *Takayuki* does not anticipate claim 1 because the solvent is not added after the 3<sup>rd</sup> process to control conductive paste viscosity. Therefore, the rejection should be withdrawn.

b. Claims 4, 8, 9, 13, and 14

Because independent claim 1 is allowable over the cited art of record, dependent claims 4, 8, 9, 13, and 14 (which depend from independent claim 1) are allowable as a matter of

law for at least the reason that the dependent claims 4, 8, 9, 13, and 14 contain all features/elements of independent claim 1. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, the rejection to these claims should be withdrawn.

3. Rejections Under 35 U.S.C. § 103(a)

In the Office Action, at paragraph 8, claims 2, 10-12, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Takayuki*, in view of *Oda et al.* (U.S. Patent 7,001,539), hereinafter *Oda*. At paragraph 9, claims 3, 5, 6, and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Takayuki* and further in view of *Nishide et al.* (U.S. Patent 6,265,090), hereinafter *Nishide*. It is well-established at law that, for a proper rejection of a claim under 35 U.S.C. § 103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements and/or features of the claim at issue. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Because independent claim 1 is allowable over the cited art of record, dependent claims 2, 3, 5, 6, 7, 11, 12, 15 and 16 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that these dependent claims contain all features/elements of independent claim 1. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, the rejection to these claims should be withdrawn.

Claim 10 is canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to this claim is rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this canceled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

Additionally, claim 2 is not obvious under the proposed combination of *Takayuki* in view of *Oda*. Claim 2 recites the feature of “wherein the conductive powder, the binder and the solvent are kneaded until the mixture reaches the wetting point (ball point) thereof.” The “wetting point” recited in claim 2 indicates a time at which the entire surface of conductive

powder becomes wet. Since the kneading continues until the mixture reaches the wetting point, claim 2 defines a time at which the kneading operation is terminated.

In contrast, *Oda* merely discloses that “it is desirable to add a surface active agent together with the solvent to enhance the wetting effect of the solvent on the metal particles” (column 3, lines 27-29). This is not the same as disclosing that the conductive powder, the binder, and the solvent are kneaded until the mixture reaches the wetting point. That is, the disclosed enhanced wetting in *Oda* is not the same as kneading until the mixture reaches the wetting point. Since neither *Takayuki* or *Oda* disclose the above-recited feature of claim 2, and the combination of *Takayuki* in view of *Oda* does not disclose, teach, or suggest the features of claim 2. Therefore, a *prima facie* case establishing an obviousness rejection by *Takayuki* in view of *Oda* has not been made. Thus, claim 2 is not obvious under the proposed combination of *Takayuki* in view of *Oda*, and the rejection should be withdrawn.


Additionally, claim 3 is not obvious under the proposed combination of *Takayuki* in view of *Nishida*. Claim 3 recites the feature of “wherein the conductive powder, the binder and the solvent are kneaded until the solids concentration of the mixture reaches 84 to 94%.”

In contrast, the Office Action alleges that *Nishida* “discloses the electrically conductive paste containing about 80-92 weight % of an electrically conductive component” at page 7. This is not the same as disclosing that the conductive powder, the binder, and the solvent are kneaded until the solids concentration of the mixture reaches 84 to 94%. That is, *Nishida* does not disclose kneading until the mixture reaches 84 to 94%. Furthermore, 80-92 weight % of an electrically conductive component is not the same as disclosing that the solid concentration of the *conductive powder and* the *binder* is 84 to 94%. Since neither *Takayuki* or *Nishida* disclose the above-recited feature of claim 3, the combination of *Takayuki* in view of *Nishida* does not disclose, teach, or suggest the features of claim 3. Therefore, a *prima facie* case establishing an obviousness rejection by *Takayuki* in view of *Nishida* has not been made. Thus, claim 3 is not obvious under the proposed combination of *Takayuki* in view of *Nishida*, and the rejection should be withdrawn.

4. Conclusion

In light of the above amendments and remarks, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that all pending claims 1-9 and 11-16 are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. Armentrout by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is further encouraged to contact Mr. Armentrout by telephone to expediently correct such informalities.

Respectfully submitted,  
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